

Set	Items	Description
S1	213	AU=(NAGAMITSU S? OR NAGAMITSU, S?)
S2	1335697	(MORE OR HIGHER OR LESS? OR LOWER OR GREATER OR INCREASE? - OR DECREAS?) (2N) (THAN OR RATE? ?)
S3	22344	(REDUC??? OR LOWER OR SPECIAL OR INTRODUCTORY) (4N) (PRICE OR CHARG???)
S4	3575829	ENERGY OR POWER OR ELECTRIC? OR UTILIT???
S5	1089430	SELLER? OR DEALER? OR AGENT? ? OR SUPPLIER? OR PRODUCER? OR MANUFACTURER? OR MERCHANT? OR VENDOR? OR TRADER? OR PROVIDER? ?
S6	376007	OFFSET? OR OFF()SET OR COMPENSAT?
S7	8117829	EQUIPMENT OR MERCHANDI? OR DEVICE? ? OR ELECTRONIC? ? OR G-ADGET? ? OR MACHINE? OR APPLIANCE?
S8	7647	DISCOUNT? OR REBATE OR INCENTIVE?
S9	2872	S3(25N)S7
S10	1	S9 AND (S4 AND S2) AND (S6 OR S8)
S11	1675661	S4 AND S7
S12	38248	S11 AND S5
S13	163	S12 AND (S3 OR S8)
S14	30	S13 AND (S6 OR S2)

? show file

File 344:Chinese Patents Abs Aug 1985-2004/May  
(c) 2004 European Patent Office

File 347:JAPIO Nov 1976-2004/Apr(Updated 040802)  
(c) 2004 JPO & JAPIO

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200454  
(c) 2004 Thomson Derwent

File 371:French Patents 1961-2002/BOPI 200209  
(c) 2002 INPI. All rts. reserv.

14/5/1 (Item 1 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

04771717  
TONER FOR DEVELOPING ELECTROSTATIC CHARGE IMAGE

PUB. NO.: 07-064317 [JP 7064317 A]  
PUBLISHED: March 10, 1995 (19950310)  
INVENTOR(s): TOMITA MASAMI  
MATSUI AKIO  
KAWASAKI KANJIRO  
MASUDA MINORU  
APPLICANT(s): RICOH CO LTD [000674] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 05-209515 [JP 93209515]  
FILED: August 24, 1993 (19930824)  
INTL CLASS: [6] G03G-009/08  
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business **Machines** ); 14.2  
(ORGANIC CHEMISTRY -- High Polymer Molecular Compounds  
JAPIO KEYWORD:R124 (CHEMISTRY -- Epoxy Resins)

ABSTRACT

PURPOSE: To obtain a toner not varying the extent of development in accordance with environmental conditions and stably ensuring high developing ability by using a toner whose degree of flocculation lowers at high temperature and humidity.

CONSTITUTION: This toner for developing an electrostatic charge image is based on a bonding resin, a colorant, an **electric** charge controlling **agent** and a flowability improver, this flowability improver is hydrophobic silica and the degree of flocculation of this toner at 30 deg.C and 90% relative humidity is **lower than** that at 10 deg.C and 15% relative humidity. The acid value of the bonding resin is <: 0.5KOHmg/g and the content is >=40wt.%. When this toner whose degree of flocculation lowers at high temperature and humidity is used, even if the extent of electrostatic **charge** of this toner is **reduced**, the amount of this toner sticking on a developer carrier is hardly reduced and a sufficient extent of development is ensured, accordingly the lowering of image density is suppressed.

14/5/2 (Item 2 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

04108789 \*\*Image available\*\*  
MAGNETIC DEVELOPER

PUB. NO.: 05-100489 [JP 5100489 A]  
PUBLISHED: April 23, 1993 (19930423)  
INVENTOR(s): ASANAE MASUMI  
GOTO TAKAHARU  
APPLICANT(s): HITACHI METALS LTD [000508] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 03-257387 [JP 91257387]  
FILED: October 04, 1991 (19911004)  
INTL CLASS: [5] G03G-009/097; G03G-009/083; G03G-009/08  
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business **Machines** ); 14.2  
(ORGANIC CHEMISTRY -- High Polymer Molecular Compounds  
JAPIO KEYWORD:R124 (CHEMISTRY -- Epoxy Resins)

JOURNAL: Section: P, Section No. 1595, Vol. 17, No. 451, Pg. 29,  
August 18, 1993 (19930818)

ABSTRACT

PURPOSE: To provide a magnetic developer having high electrostatic chargeability and capable of stabilizing image density even at the time of continuous development.

CONSTITUTION: In a magnetic developer 3 obtained by mixing a magnetic toner containing at least binding resin, magnetic powder and an **electric** charge controlling **agent** with a magnetic carrier, the content of the magnetic powder is regulated to 50-75wt.% and that of the **electric** charge controlling **agent** to 0.5-5wt.%. An **electric charge** controlling agent having **lower** volume resistivity **than** the above-mentioned **electric** charge controlling **agent** is further added by 0.05-1 pt.wt. per 100 pts.wt. of the magnetic toner.

14/5/3 (Item 3 from file: 347)

DIALOG(R)File 347:JAPIO

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04090428

LITHIUM SECONDARY BATTERY

PUB. NO.: 05-082128 [JP 5082128 A]

PUBLISHED: April 02, 1993 (19930402)

INVENTOR(s): SAKATA TADASHI

KAWAI TETSUO

APPLICANT(s): HITACHI MAXELL LTD [000581] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 03-270409 [JP 91270409]

FILED: September 20, 1991 (19910920)

INTL CLASS: [5] H01M-004/40; H01M-004/02; H01M-010/40

JAPIO CLASS: 42.9 ( **ELECTRONICS** -- Other

JAPIO KEYWORD:R053 (FIBERS -- Fibrillated Fibers)

JOURNAL: Section: E, Section No. 1406, Vol. 17, No. 411, Pg. 135, July 30, 1993 (19930730)

ABSTRACT

PURPOSE: To prevent pulverization of a negative electrode, and provide a battery having excellent charging/discharging cycle characteristics by using lithium alloy powder having a specified average particle diameter as a negative electrode active material of the battery, and **reducing** **charging** /discharging time negative electrode surface stress causing the pulverization of the negative electrode by charging/ discharging.

CONSTITUTION: As a particle diameter of lithium alloy powder used in a negative electrode active material is made smaller and smaller, an effect of preventing pulverization of a negative electrode caused by charging/discharging can be improved, but if the particle diameter is made too small, internal pressure is increased. Thereby, an average particle diameter of alloy is set equal to or smaller than 100.mu.m as well as equal to or larger than 0.5.mu.m. Here, for example, alloy such as lithium, aluminium, lead, indium, bismuth or cadmium is used as the alloy. Preferably, a percentage of the lithium in the alloy is set to be 10-60 atomic%, and when the percentage is equal to or **less than** 10%, a battery capacity is decreased, and when the percentage is larger than 10%, a dendrite restrainable action is diminished. The negative electrode is formed by means of pressurized molding, but an **electrically** conductive

agent , a binding agent , and so on are may well be added to this.

14/5/4 (Item 4 from file: 347)

DIALOG(R)File 347:JAPIO

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00889964

TONER FOR DEVELOPING ELECTROSTATIC LATENT IMAGE

PUB. NO.: 57-040264 [JP 57040264 A]

PUBLISHED: March 05, 1982 (19820305)

INVENTOR(s): KORI SHUNTARO

KATO HITOSHI

ITO NOBORU

APPLICANT(s): MINOLTA CAMERA CO LTD [000607] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 55-116146 [JP 80116146]

FILED: August 23, 1980 (19800823)

INTL CLASS: [3] G03G-009/08

JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines )

JOURNAL: Section: P, Section No. 123, Vol. 06, No. 108, Pg. 147, June 18, 1982 (19820618)

#### ABSTRACT

PURPOSE: To **reduce** the rate of **electric charge** attenuation during electrostatic storage by constituting a titled toner of coloring **agent** , electrostatic charge control **agents** and a binder consisting of thermoplastic resins having Lewis acid functional groups in part.

CONSTITUTION: The toner is constituted of coloring **agents** , **electric charge control agent** imparting positive chargeability, for example, oil black of nigrosine type, basic triphenyl methane dyes having ion centers to dissociate to positive ions, and the like, and thermoplastic resins having Lewis acid functional groups selected from carboxyl groups, carbonyl groups, nitro groups, cyano groups, glycidyl groups, nitrile groups, epoxy groups, etc. attracting electron pairs as a binder. Thereby, the toner of **less rate of electric charge** attenuation under various environmental conditions and upon lapse of days is obtained.

14/5/5 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

016370434 \*\*Image available\*\*

WPI Acc No: 2004-528341/200451

XRAM Acc No: C04-194605

XRPX Acc No: N04-418754

Developing agent for process cartridge, has specific toner concentration change during idling of image development unit, and preset ratio of peak value to half value width when measuring amount distribution of electrical charging of toner

Patent Assignee: RICOH KK (RICO )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2004184908	A	20040702	JP 2002354694	A	20021206	200451 B

Priority Applications (No Type Date): JP 2002354694 A 20021206

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes  
JP 2004184908 A 9 G03G-009/08

Abstract (Basic): JP 2004184908 A

NOVELTY - A developing **agent** consists of toner which is provided to an image development unit (4) for developing an electrostatic latent image, and a magnetic carrier. The ratio of peak value to half value width is 0.5 or more, when the amount distribution of **electrical** charging of toner is measured. The toner concentration change when performing idling of the image development unit is **less than 1%**.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for process cartridge (1), which has a photoreceptor (2), an image development unit, a charging unit and/or a cleaning unit (7). The units are supported integrally. The process cartridge is detachably formed at image forming **device** main portion. The developing **agent** is used in the image development unit.

USE - For image development unit of process cartridge (claimed) used for developing electrostatic latent image formed in electrophotographic, electrostatic recording and electrostatic printing method.

ADVANTAGE - The developing **agent** outputs a high-resolution image stably. The process cartridge utilizing the developing **agent** has high reliability and does not have toner scattering. The developing **agent** has **reduced** fluctuation of **electrical charging** property, even after long period of time.

DESCRIPTION OF DRAWING(S) - The figure shows the outline structure of process cartridge.

process cartridge (1)  
photoreceptor (2)  
**electrical** charging roller (3)  
image development unit (4)  
cleaning unit (7)  
pp; 9 DwgNo 1/2

Title Terms: DEVELOP; **AGENT** ; PROCESS; CARTRIDGE; SPECIFIC; TONER;  
CONCENTRATE; CHANGE; IDLE; IMAGE; DEVELOP; UNIT; PRESET; RATIO; PEAK;  
VALUE; HALF; VALUE; WIDTH; MEASURE; AMOUNT; DISTRIBUTE; **ELECTRIC** ;  
CHARGE; TONER

Derwent Class: G08; P84; S06; T04

International Patent Class (Main): G03G-009/08

International Patent Class (Additional): G03G-005/147; G03G-009/097;  
G03G-009/10; G03G-015/08

File Segment: CPI; EPI; EngPI

14/5/6 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

016302562 \*\*Image available\*\*

WPI Acc No: 2004-460457/200443

Related WPI Acc No: 2004-091006; 2004-417964

XRAM Acc No: C04-171822

XRPX Acc No: N04-364696

Photovoltaic device e.g. solar cell comprises porous template having array of template pores, first charge-transfer material, second charge transfer material, base electrode and transparent conducting electrode

Patent Assignee: NANOSOLAR INC (NANO-N)

Inventor: FIDANZA J; PETRITSCH K; PICHLER K; ROSCHEISEN M; SAGER B; YU D

Number of Countries: 102 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200444948	A2	20040527	WO 2003US19173	A	20030617	200443 B

Priority Applications (No Type Date): US 2003443546 A 20030522; US 2002390904 P 20020622; US 2002290119 A 20021105; US 2002303665 A 20021122 ; US 2002319406 A 20021211

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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WO 200444948	A2	E	50 H01L-000/00	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): WO 200444948 A2

NOVELTY - A photovoltaic **device** (100) comprises porous template having an array of template pores, first charge-transfer material (M1), second charge transfer material (M2), base electrode (110) and transparent conducting electrode (106). (M1) Fills the template pores (P1) and (M2) fills space not occupied by (M1). (M2) Has complementary charge-transfer characteristic with respect to the porous template. (M1) And (M2) are disposed between the base electrode and the transparent conducting electrode.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for preparation of a photovoltaic **device** involving anodizing a layer of metal to form porous template; filling (P1) with (M1) and additional spaces not occupied by (M1) with (M2).

USE - As photovoltaic **device** e.g. solar cell (claimed).

ADVANTAGE - The method provides a photovoltaic **devices** with large scale and reduced cost.

DESCRIPTION OF DRAWING(S) - The figure shows a portion of photovoltaic **device**.

photovoltaic **device** (100)  
base electrode (110)  
transparent conducting electrode (106)  
interface layer (104)  
active layer. (101)  
pp; 50 DwgNo 1/4

Title Terms: PHOTOVOLTAIC; **DEVICE** ; SOLAR; CELL; COMPRISE; POROUS; TEMPLATE; ARRAY; TEMPLATE; PORE; FIRST; CHARGE; TRANSFER; MATERIAL; SECOND; CHARGE; TRANSFER; MATERIAL; BASE; ELECTRODE; TRANSPARENT; CONDUCTING; ELECTRODE

Derwent Class: A85; E24; L03; U11; U12; X15

International Patent Class (Main): H01L-000/00

File Segment: CPI; EPI

14/5/7 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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016209077 \*\*Image available\*\*

WPI Acc No: 2004-366963/200435

XRAM Acc No: C04-138797

XRPX Acc No: N04-293474

**Charging roller for electrophotographic apparatus, has outer layer arranged on surface of elastic layer, formed with holes such that ratio between length and diameter of hole is set in specific range**

Patent Assignee: CANON KK (CANO )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2004037786	A	20040205	JP 2002194041	A	20020703	200435 B

Priority Applications (No Type Date): JP 2002194041 A 20020703

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2004037786	A		37	G03G-015/02	

Abstract (Basic): JP 2004037786 A

NOVELTY - An elastic layer is formed on a electroconductive support. An outer layer (2z) is formed with holes (2z-2) and porous powder (2z-3) and is arranged on the surface of the elastic layer. The length and diameter of the hole are set to L and D such that the ratio (L/D) is set at least 1.1.

DETAILED DESCRIPTION - The outer layer consists of urethane group resin and **electronic** type electroconductive distribution **agent**. The resin layer contains rubber such as epichlorohydrin rubber and ion type electroconductive distribution **agent**. INDEPENDENT CLAIMS are also included for the following:

(1) electrophotographic apparatus which has charging roller to apply preset charge on electrophotographic photoreceptor, before forming electrostatic-latent image. The toner is transferred to the formed image, so as to form toner image. The glass transition temperature of toner is 30-80 degrees C. The ten-point average roughness of the charge roller and electroconductive elastic element are set as Rz1, Rz2, respectively such that Rz1 is **less than** Rz2. The Asker-C hardness of charging roller and elastic element are set to Hs1 and Hs2, respectively such that Hs1 is **less than** Hs2. The volume resistivity value of the charging roller and elastic element are set to rho1 and rho2, respectively such that rho1 is **less than** rho2; and

(2) process cartridge.

USE - For electrophotographic apparatus such as copier, printer and facsimile.

ADVANTAGE - The shape of the surface of the **charging** roller, **reduces** the adhesion amount of the foreign material. Enables to maintain stable **electrical** charging property for long time period. Enables to output about 1200 or more sheets, without replenishment and maintenance operations.

DESCRIPTION OF DRAWING(S) - The figure shows the cross-sectional views of the outer layer of the charging roller

outer layer (2z)  
high molecular compound portion (2z-1)  
hole (2z-2)  
porous powder (2z-3)  
pp; 37 DwgNo 1/14

Title Terms: CHARGE; ROLL; ELECTROPHOTOGRAPHIC; APPARATUS; OUTER; LAYER; ARRANGE; SURFACE; ELASTIC; LAYER; FORMING; HOLE; RATIO; LENGTH; DIAMETER; HOLE; SET; SPECIFIC; RANGE

Derwent Class: A89; G08; P84; Q62; S06; T04; W02

International Patent Class (Main): G03G-015/02

International Patent Class (Additional): F16C-013/00; G03G-009/08; G03G-015/08

File Segment: CPI; EPI; EngPI

14/5/8 (Item 4 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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015609204 \*\*Image available\*\*  
WPI Acc No: 2003-671361/200363  
XRAM Acc No: C03-183075  
XRPX Acc No: N03-536085

**Polymer gel hybrid solar cell for large area devices comprises polymer gel electrolyte including a homopolymer or copolymer e.g. polyethylene oxide**

Patent Assignee: SONY CORP (SONY ); SONY INT EURO GMBH (SONY )  
Inventor: MITEVA T; NELLES G; NODA K; YASUDA A  
Number of Countries: 100 Number of Patents: 002  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200354894	A1	20030703	WO 2002EP14510	A	20021218	200363 B
AU 2002358761	A1	20030709	AU 2002358761	A	20021218	200428

Priority Applications (No Type Date): EP 2001130661 A 20011221

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200354894	A1	E	28	H01G-009/20	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA  
ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB  
GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM  
ZW

AU 2002358761	A1			H01G-009/20	Based on patent WO 200354894
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Abstract (Basic): WO 200354894 A1

NOVELTY - A polymer gel hybrid solar cell for large area **devices** comprises polymer gel electrolyte containing a polymer selected from homopolymers and copolymers.

USE - Polymer gel hybrid solar cell for large area **devices** .

ADVANTAGE - The solar cell has high **energy** conversion efficiency, and can be formed into a variety of shapes.

DESCRIPTION OF DRAWING(S) - The figure shows the basic structure of a hybrid solar cell having I-/I-3 as redox couple and titanium dioxide layer as electron transport layer.

pp; 28 DwgNo 1/6

Title Terms: POLYMER; GEL; HYBRID; SOLAR; CELL; AREA; **DEVICE** ; COMPRISE;  
POLYMER; GEL; ELECTROLYTIC; HOMOPOLYMER; COPOLYMER; POLYETHYLENE; OXIDE  
Derwent Class: A85; E19; L03; S02; U12; V01; X15; X16  
International Patent Class (Main): H01G-009/20  
File Segment: CPI; EPI

14/5/9 (Item 5 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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015539253  
WPI Acc No: 2003-601409/200357  
XRAM Acc No: C03-163763



XRPX Acc No: N03-479172

**Transparent gas barrier property film used for packaging, comprises over coat layer with preset surface resistance and aluminum oxide layer formed in order on plastic film surface**

Patent Assignee: TOYO METALLISING KK (TOYC )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2003071969	A	20030312	JP 2001267827	A	20010904	200357 B

Priority Applications (No Type Date): JP 2001267827 A 20010904

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 2003071969	A	5	B32B-009/00	

Abstract (Basic): JP 2003071969 A

NOVELTY - A transparent gas barrier property film comprises an over coat layer and an aluminum oxide layer formed in order on a plastic film base material surface. The over coat layer has surface resistance of **less than**  $1 \times 10^{-13}$  OMEGA/square. The film surface has coefficient of static friction of 0.5 or less and coefficient of dynamic friction of 0.4 or less.

USE - For packaging dry food e.g. confectionery, snack, hydrated foodstuff, non-foodstuff such as disposable pocket body warmer and **electronic** component.

ADVANTAGE - The transparent gas barrier property film prevents the generation of wrinkles during printing and bonding process. The deterioration of the gas barrier property during processing and **electrical charging** of the film are **reduced**.

pp; 5 DwgNo 0/0

Title Terms: TRANSPARENT; GAS; BARRIER; PROPERTIES; FILM; PACKAGE; COMPRISE ; COAT; LAYER; PRESET; SURFACE; RESISTANCE; ALUMINIUM; OXIDE; LAYER; FORMING; ORDER; PLASTIC; FILM; SURFACE

Derwent Class: A92; B07; P73

International Patent Class (Main): B32B-009/00

International Patent Class (Additional): B32B-027/36; C08J-007/04; C08L-101-00

File Segment: CPI; EngPI

14/5/10 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015163959

WPI Acc No: 2003-224487/200322

XRAM Acc No: C03-057757

XRPX Acc No: N03-178959

**Electrical charging filter, e.g. for mask and respirators, has prefilter layer and back-up filter layer containing electrical charging non-woven fabric of specific mass/unit area, either side of main filter layer**

Patent Assignee: JAPAN VILENE CO LTD (NIVL )

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2002316010	A	20021029	JP 2001122641	A	20010420	200322 B
KR 2002082407	A	20021031	KR 200217386	A	20020329	200322

Priority Applications (No Type Date): JP 2001122641 A 20010420

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 2002316010 A 13 B01D-039/14

KR 2002082407 A A62B-023/02

Abstract (Basic): JP 2002316010 A

NOVELTY - An **electrical** charging filter has a prefilter layer, a main filter layer and a back-up filter layer. Both the prefilter and back-up filter layers contain **electrical** charging non-woven fabric, with mass/unit area of 40-190 g/m<sup>2</sup> and 100-300 g/m<sup>2</sup>, respectively. The main filter layer contains **electrical** charging non-woven fabric containing fibers, with average fiber diameter of **less than** 10 micron.

DETAILED DESCRIPTION - An **electrical** charging filter has a prefilter layer, a main filter layer and a back-up filter layer, laminated sequentially. Both the prefilter layer and the back-up filter layer contain **electrical** charging non-woven fabric having mass/unit area of 40-190 g/m<sup>2</sup> and 100-300 g/m<sup>2</sup>, respectively. The main filter layer contains **electrical** charging non-woven fabric containing fiber having average fiber diameter of **less than** 10 micron. The average fineness of fiber of non-woven fabric of prefilter layer and back-up filter layer is 1-6 dtex. The mass/unit area of back-up filter layer is larger than that of the prefilter layer.

An INDEPENDENT CLAIM is included for a mask formed by laminating the above **electrical** charging filter with a non-woven fabric molded in the shape of a cup.

USE - For mask (claimed), respirators and air conditioners.

ADVANTAGE - Since the mass/unit area of back-up layer is larger than that of the prefilter layer, reduction of particle collection efficiency by neutralization of **electrical** charge is prevented, and high collection efficiency is maintained. The pressure loss during the initial stage is **reduced**. The **electrical** charging filter has excellent reinforcement effect, shape stability, strength, handling property and durability. The mask obtained by the **electrical** charging filter has excellent filtration characteristics and low intake resistance value (pressure loss).

pp; 13 DwgNo 0/6

Title Terms: **ELECTRIC** ; CHARGE; FILTER; MASK; RESPIRATION; PREFILTER; LAYER; BACK; UP; FILTER; LAYER; CONTAIN; **ELECTRIC** ; CHARGE; NON; WOVEN; FABRIC; SPECIFIC; MASS; UNIT; AREA; SIDE; MAIN; FILTER; LAYER

Derwent Class: A88; J01; P35; P41; P73; Q74

International Patent Class (Main): A62B-023/02; B01D-039/14

International Patent Class (Additional): A62B-018/02; B03C-003/28;

B32B-005/26; B32B-007/02; D04H-001/42; D04H-003/16; F24F-007/013

File Segment: CPI; EngPI

14/5/11 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014929635 \*\*Image available\*\*

WPI Acc No: 2002-750344/200281

XRPX Acc No: N02-591005

Image forming device such as tandem color laser printer, has high resistance developing agent with higher electrical resistance and lower charge -to-mass ratio than that of low-resistance developing agent

Patent Assignee: BROTHER KOGYO KK (BRER )

Inventor: SATO S; SUZUKI M

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020141785	A1	20021003	US 2002106070	A	20020327	200281 B
JP 2002296840	A	20021009	JP 200197773	A	20010330	200281
US 6721524	B2	20040413	US 2002106070	A	20020327	200425

Priority Applications (No Type Date): JP 200197773 A 20010330

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020141785	A1		10	G03G-015/01	
JP 2002296840	A		11	G03G-009/09	
US 6721524	B2			G03G-015/01	

Abstract (Basic): US 20020141785 A1

NOVELTY - An image forming portion (5) uses different color developing **agents** that are configured from binding resins with the same thermal properties and including high and low resistance developing **agents**, to form color image on sheet (3). The high-resistance developing **agent** has higher **electrical** resistance and **lower charge** -to-mass ratio. A thermal roller (31) fixes the color image from the developing **agents** onto the sheet.

USE - Image forming **device** such as tandem-type color laser printer.

ADVANTAGE - Since the high-resistance developing **agent** has a **lower charge** -to-mass ratio than the low-resistance developing **agent**, image forces exerted by the charge of the high resistance developing **agent** are reduced, so the developing **agent** does not cling as easily to the thermal roller. Therefore, the color image formed from several developing **agent** types with different resistance values are properly fixed to the sheet without fear of electrostatic **offset** occurring.

DESCRIPTION OF DRAWING(S) - The figure shows a cross-sectional view of the color laser printer.

Sheet (3)

Image forming portion (5)

Thermal roller (31)

pp; 10 DwgNo 1/1

Title Terms: IMAGE; FORMING; **DEVICE**; TANDEM; COLOUR; LASER; PRINT; HIGH; RESISTANCE; DEVELOP; **AGENT**; HIGH; **ELECTRIC**; RESISTANCE; LOWER; CHARGE; MASS; RATIO; LOW; RESISTANCE; DEVELOP; **AGENT**

Derwent Class: P84; S06; T04

International Patent Class (Main): G03G-009/09; G03G-015/01

International Patent Class (Additional): G03G-015/20

File Segment: EPI; EngPI

14/5/12 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014887209

WPI Acc No: 2002-707915/200276

XRPX Acc No: N02-558199

On-line shopping system for selling a product over an electronic communication network; completes the sale transactions at a future end price that is the same as or lower than the starting price and the number of buyers

Patent Assignee: SHIMANSKY Y (SHIM-I)

Inventor: SHIMANSKY Y

Number of Countries: 100 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
ZA 200107085	A	20020529	ZA 20017085	A	20010827	200276 B
WO 2003100675	A1	20031204	WO 2002IB1843	A	20020528	200406 N
AU 2002310565	A1	20031212	AU 2002310565	A	20020528	200443 N
			WO 2002IB1843	A	20020528	

Priority Applications (No Type Date): ZA 20003872 A 20000731; WO 2002IB1843 A 20020528; AU 2002310565 A 20020528

# Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
ZA 200107085	A		8	G06F-000/00	
WO 2003100675	A1	E		G06F-017/60	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

AU 2002310565 A1 G06F-017/60 Based on patent WO 2003100675

## Abstract (Basic): ZA 200107085 A

NOVELTY - Software executable on a **supplier** computer may record a starting price for a product and receive its binding on-line purchase offers from buyers forming part of a buyers group. The software may complete the sale transactions at a future end price that is the same as or **lower than** that start **price** and determined by a number of buyers, when one of a set period of time has expired and a minimum sales price for the product is achieved.

USE - For purchasing of goods or services over **electronic** communication networks such as the Internet.

ADVANTAGE - Allows all the buyers wishing to buy cases of red wine to join forces in a buying group that is formed specifically to gain bulk buying **power** for the purpose of driving the price of the product down. Results in labor, freight and administrative cost savings to the **supplier** as the purchase of the cases of red wine by the buyers in the buying group can generally be dealt with by the **supplier** as a bulk sale. Assists **suppliers** in maintaining suitable stock levels of the their product. Assists in providing **suppliers** with advance warning of large orders.

pp; 8 DwgNo 0/0

Title Terms: LINE; SHOPPING; SYSTEM; SELL; PRODUCT; **ELECTRONIC** ;  
COMMUNICATE; NETWORK; COMPLETE; SALE; TRANSACTION; FUTURE; END; PRICE;  
LOWER; START; PRICE; NUMBER; BUY

Derwent Class: T01; T05

International Patent Class (Main): G06F-000/00; G06F-017/60

File Segment: EPI

14/5/13 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014416352

WPI Acc No: 2002-237055/200229

Related WPI Acc No: 1999-561059; 2001-070116; 2001-315364; 2001-396925;  
2002-499242

XRAM Acc No: C02-071703

XRPX Acc No: N02-182359

Insulating fluid for electrical components comprises (partially)

**hydrogenated vegetable base oil or vegetable oil higher in oleic acid content relative to corresponding commodity grain vegetable oil, and antioxidant**

Patent Assignee: WAVELY LIGHT & POWER (WAVE-N)

Inventor: CANNON G S; KOTOWSKI J A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6340658	B1	20020122	US 9875963	A	19980511	200229 B
			US 99335990	A	19990618	
			US 2000705015	A	20001102	

Priority Applications (No Type Date): US 2000705015 A 20001102; US 9875963 A 19980511; US 99335990 A 19990618

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6340658	B1	12	C10M-105/32		Cont of application US 9875963 CIP of application US 99335990 Cont of patent US 5958851 CIP of patent US 6159913

Abstract (Basic): US 6340658 B1

NOVELTY - An insulating fluid for **electrical** components comprises:

(a) a base oil comprising (partially) hydrogenated vegetable oil and/or vegetable oil higher in oleic acid content relative to a corresponding vegetable oil made from commodity grain; and  
(b) an antioxidant.

The vegetable oil comprises soybean oil and/or corn oil made from corn higher in oleic acid content than commodity corn. The corn is genetically-modified or bred

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(I) a method of making an **electrical** component involving preparing the **electrically** -insulating fluid; and  
(II) an **electrical** component comprising a body, cavity for fluid and the **electrically** -insulating fluid.

USE - The fluid can be used in new **equipment** , as well as retrofitting existing **equipment** , e.g. transformers, oil-filled **electrical** switches, oil-filled **electrical** bushings, oil-filled capacitors, oil-cooled reactors and oil-filled **electrical** regulators.

ADVANTAGE - Fluid has improved pour point, improved stability, and **lower price** . Retrofitting and/or blending also makes an existing fluid more environmentally friendly.

pp; 12 DwgNo 0/2

Title Terms: INSULATE; FLUID; **ELECTRIC** ; COMPONENT; COMPRISE; HYDROGENATION; VEGETABLE; BASE; OIL; VEGETABLE; OIL; HIGH; OLEIC; ACID; CONTENT; RELATIVE; CORRESPOND; COMMODITY; GRAIN; VEGETABLE; OIL; ANTIOXIDANT

Derwent Class: E19; H08; L03; X12

International Patent Class (Main): C10M-105/32

International Patent Class (Additional): H01B-003/20

File Segment: CPI; EPI

14/5/14 (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014279798 \*\*Image available\*\*

WPI Acc No: 2002-100499/200214  
XRAM Acc No: C02-031792  
XRPX Acc No: N02-074352

**Contact charging device used for electrophotographic apparatus,  
impresses pulse voltage on an electrification unit by contact with  
electrified charged material**

Patent Assignee: CANON KK (CANO )  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2001290340	A	20011019	JP 2000103675	A	20000405	200214 B

Priority Applications (No Type Date): JP 2000103675 A 20000405

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2001290340	A		8	G03G-015/02	

Abstract (Basic): JP 2001290340 A

NOVELTY - The contact charging **device** impresses voltage on an electrification unit (1) by contact with a charged material which is electrified. The electrification unit has a surface roughness in wire height (Rp) of 1.4-2.4 mum and roughness in wire depth (Rv) of **less than** 1.45 mum. Pulse voltage is impressed from outside, which super imposed DC voltage and alternating voltage.

DETAILED DESCRIPTION - The contact charging **device** impresses voltage on an electrification unit by contact with a charged material which is electrified. The electrification unit has a resistance layer (4) and a surface layer (5). An electro conductive **agent** containing N-alkoxy methylated nylon is provided in the surface, which has a roughness in wire height (Rp) of 1.4-2.4 mum and roughness in wire depth (Rv) of **less than** 1.45 mum. Pulse voltage is impressed from outside, which super imposed DC voltage and alternating voltage. INDEPENDENT CLAIMS are also included for the following: (i) Contact electrification method; and (ii) Electrophotographic apparatus which comprises electrification unit contacted with electrophotographic sensitive material and exposure unit. An image development unit, a transfer charging unit and a cleaning unit are further comprised.

USE - For electrophotographic apparatus.

ADVANTAGE - Uniform electrification is performed directly. Scraping of **charged** material is **reduced** and a favorable image is obtained.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of electrification unit.

Electrification unit (1)

Resistance layer (4)

Surface layer (5)

pp; 8 DwgNo 1/2

Title Terms: CONTACT; CHARGE; **DEVICE** ; ELECTROPHOTOGRAPHIC; APPARATUS;  
IMPRESS; PULSE; VOLTAGE; **ELECTRIC** ; UNIT; CONTACT; **ELECTRIC** ; CHARGE;  
MATERIAL

Derwent Class: A23; A89; G08; P84; S06

International Patent Class (Main): G03G-015/02

International Patent Class (Additional): C08K-003/00; C08L-077/00

File Segment: CPI; EPI; EngPI

14/5/15 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014123354 \*\*Image available\*\*

WPI Acc No: 2001-607566/200169  
XRAM Acc No: C01-180551  
XRPX Acc No: N01-453537

**Battery prolonging apparatus comprises battery life extending composition and applicator, reservoir, or unit dose container for refreshingly incorporating battery life extending composition into electrolyte**

Patent Assignee: FITTER J C (FITT-I); MORRIS R T (MORR-I); BELMONT R E (BELM-I); KAN J T C (KANJ-I)

Inventor: BELMONT R E; FITTER J C; KAN J T; MORRIS R T; KAN J T C

Number of Countries: 094 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200171834	A2	20010927	WO 2001US8662	A	20010319	200169 B
AU 200145842	A	20011003	AU 200145842	A	20010319	200210
US 20020051912	A1	20020502	US 2000190693	P	20000320	200234
			US 2001812258	A	20010319	
GB 2376560	A	20021218	WO 2001US8662	A	20010319	200307
			GB 200221930	A	20020920	
DE 10195951	T	20030522	DE 1095951	A	20010319	200335
			WO 2001US8662	A	20010319	
US 6635387	B2	20031021	US 2000190693	P	20000320	200370
			US 2001812258	A	20010319	
US 20040048144	A1	20040311	US 2000190693	P	20000320	200419
			US 2001812258	A	20010319	
			US 2003652401	A	20030829	

Priority Applications (No Type Date): US 2000190693 P 20000320; US 2001812258 A 20010319; US 2003652401 A 20030829

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200171834	A2	E	60	H01M-006/00	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200145842	A			H01M-006/00	Based on patent WO 200171834
US 20020051912	A1			H01M-002/36	Provisional application US 2000190693
GB 2376560	A			H01M-006/00	Based on patent WO 200171834
DE 10195951	T			H01M-006/00	Based on patent WO 200171834
US 6635387	B2			H01M-006/04	Provisional application US 2000190693
US 20040048144	A1			H01M-002/36	Provisional application US 2000190693

Div ex application US 2001812258  
Div ex patent US 6635387

Abstract (Basic): WO 200171834 A2

NOVELTY - A battery prolonging apparatus comprises a battery life extending composition; and an applicator, a reservoir or a unit dose container for refreshingly incorporating the battery life extending composition into the electrolyte to maintain an active concentration of the battery life extending composition in the electrolyte.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(A) a composition for prolonging battery life comprising an organic compound containing an alkyl substituent, and a carrier for encapsulating the compound for slow release into an electrolyte; and

(B) a method for prolonging battery life comprising providing a battery containing an electrolyte, providing a battery life extending composition, and refreshingly incorporating the battery life extending

composition in the electrolyte to maintain an amount of the battery life extending composition in the electrolyte.

USE - For prolonging the useful life of a battery for automobiles.

ADVANTAGE - The inventive apparatus provides a reduction in water disassociation/gas evolution; reduces depositions which can result in cell shortening; reduces corrosion of the battery components; progressively adds a battery life increasing composition to a battery over its useful life; and **reduces** self discharge, maintaining the **charge** in the battery during storage.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic sectional view of a multi-celled battery and a battery watering arrangement.

pp; 60 DwgNo 6b/9

Title Terms: BATTERY; PROLONG; APPARATUS; COMPRISE; BATTERY; LIFE; EXTEND; COMPOSITION; APPLY; RESERVOIR; UNIT; DOSE; CONTAINER; INCORPORATE;

BATTERY; LIFE; EXTEND; COMPOSITION; ELECTROLYTIC

Derwent Class: E15; E16; L03; X16; X22

International Patent Class (Main): H01M-002/36; H01M-006/00; H01M-006/04

File Segment: CPI; EPI

14/5/16 (Item 12 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013718856

WPI Acc No: 2001-203086/200120

XRAM Acc No: C01-060396

**Metal smelting method for iron ore involves pre-reducing mixed raw material containing carbonaceous material and metal oxide and/or hydroxide and then reducing the material with carbonaceous material in smelting furnace**

Patent Assignee: NKK CORP (NIKN ); ISOZAKI S (ISOZ-I); IWASAKI K (IWAS-I); SEKIGUCHI T (SEKI-I); TAGUCHI N (TAGU-I)

Inventor: ISOZAKI S; IWASAKI K; SEKIGUCHI T; TAGUCHI N

Number of Countries: 029 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200118256	A1	20010315	WO 2000JP5916	A	20000831	200120 B
AU 200068668	A	20010410	AU 200068668	A	20000831	200137
EP 1253207	A1	20021030	EP 2000956840	A	20000831	200279
			WO 2000JP5916	A	20000831	
TW 477817	A	20020301	TW 2000118226	A	20000906	200305
US 20030047038	A1	20030313	WO 2000JP5916	A	20000831	200321
			US 200285797	A	20020228	
JP 2001521790	X	20030402	WO 2000JP5916	A	20000831	200325
			JP 2001521790	A	20000831	
CN 1399688	A	20030226	CN 2000812521	A	20000831	200337

Priority Applications (No Type Date): JP 2000214241 A 20000714; JP 99252162 A 19990906; JP 200046617 A 20000223; JP 200054112 A 20000229; JP 2000125192 A 20000426; JP 2000126701 A 20000426; JP 2000126713 A 20000426; JP 2000126714 A 20000426; JP 2000166807 A 20000426; JP 2000166808 A 20000426; JP 2000128520 A 20000427

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200118256 A1 J 196 C21B-011/00

Designated States (National): AU BR CA CN ID IN JP KR US

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU

MC NL PT SE

AU 200068668 A C21B-011/00 Based on patent WO 200118256

EP 1253207 A1 E C21B-011/00 Based on patent WO 200118256



Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI  
LU MC NL PT SE

TW 477817 A C21B-011/00  
US 20030047038 A1 C22B-009/05 Cont of application WO 2000JP5916  
JP 2001521790 X C21B-011/00 Based on patent WO 200118256  
CN 1399688 A C21B-011/00

Abstract (Basic): WO 200118256 A1

NOVELTY - A metal smelting method comprises: pre-reducing a mixed raw material containing carbonaceous material and metal oxide and/or hydroxide, so that 5-55% of the metal oxide and/or hydroxide is **reduced** to a metallic state; **charging** this to a smelting furnace; and reducing with carbonaceous material, using the combustion heat of the carbonaceous material and generated carbon monoxide.

DETAILED DESCRIPTION - A metal smelting method comprises either:

(1) pre-reducing at least one mixed raw material chosen from mixtures, granulated mixtures and molded mixtures of at least carbonaceous material and metal oxide and/or hydroxide, in a pre-reduction furnace, so that on average 5-55% of the metal oxide and/or hydroxide is reduced to a metallic state;

(2) **charging** the pre- **reduced** material to a metal-smelting furnace; and

(3) melting and finally reducing the material using carbonaceous material as the reducing **agent**, and using the combustion heat of the carbonaceous material and that of the carbon monoxide generated in the smelting furnace as the main heat sources; or

(i) pre-reducing at least one mixed raw material chosen from mixtures, granulated mixtures and molded mixtures of at least carbonaceous material and metal oxide and/or hydroxide, in a pre-reduction furnace, so that **more than** 5% of the metal oxide and/or hydroxide is reduced to a metallic state;

(ii) charging a smelting furnace with this pre-reduced material as well as a metal oxide and/or hydroxide having a lower pre-reduction ratio than the pre-reduced mixed raw material and/or a non-pre-reduced metal oxide and/or hydroxide, so that the average metallization ratio is 5-55%; and

(iii) melting and finally reducing the material using carbonaceous material as the reducing **agent**, and using the combustion heat of the carbonaceous material and that of the carbon monoxide generated in the smelting furnace as the main heat sources.

An INDEPENDENT CLAIM is also included for a metal smelting apparatus for the method.

USE - The method is used for smelting reduction of a metal oxide and/or hydroxide, such as iron ore.

ADVANTAGE - The method allows the production of a molten metal from smelting reduction of a metal oxide and/or hydroxide with good **energy** balance and high efficiency, so that productivity is high and cost is low.

pp; 196 DwgNo 0/68

Title Terms: METAL; SMELT; METHOD; IRON; ORE; PRE; REDUCE; MIX; RAW; MATERIAL; CONTAIN; CARBONACEOUS; MATERIAL; METAL; OXIDE; HYDROXIDE; REDUCE; MATERIAL; CARBONACEOUS; MATERIAL; SMELT; FURNACE

Derwent Class: M24

International Patent Class (Main): C21B-011/00; C22B-009/05

International Patent Class (Additional): C21B-013/08; C22B-001/16; C22B-001/20; C22B-005/10

File Segment: CPI

14/5/17 (Item 13 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013166875

WPI Acc No: 2000-338748/200029

XRAM Acc No: C00-102743

XRPX Acc No: N00-254282

**A device (I) for delivering an agent across the intestinal wall**

Patent Assignee: ELAN CORP PLC (ELAN-N)

Inventor: BRAYDEN D J; GROSS J

Number of Countries: 089 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200016741	A1	20000330	WO 99IE97	A	19990917	200029 B
AU 9957572	A	20000410	AU 9957572	A	19990917	200035

Priority Applications (No Type Date): US 98100892 P 19980923; IE 98780 A 19980921

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200016741 A1 E 73 A61K-009/00

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 9957572 A A61K-009/00 Based on patent WO 200016741

Abstract (Basic): WO 200016741 A1

NOVELTY - A **device** (I) for delivering an **agent** across the intestinal wall of a mammal comprises means for applying a potential across the intestinal wall, an **agent**, and means for locating the **agent** proximate to the intestinal wall.

USE - The **device** is used for delivering proteins and peptides across the intestinal wall.

ADVANTAGE - (I) has a **lower** delivery **charge** than prior art compounds as compared to prior art compounds due to lower transepithelial resistance.

pp; 73 DwgNo 0/18

Title Terms: **DEVICE**; DELIVER; **AGENT**; INTESTINAL; WALL

Derwent Class: A11; A14; A26; A96; B05; B07; D16; P34; S05

International Patent Class (Main): A61K-009/00

International Patent Class (Additional): A61N-001/30

File Segment: CPI; EPI; EngPI

14/5/18 (Item 14 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013097278 \*\*Image available\*\*

WPI Acc No: 2000-269150/200023

Related WPI Acc No: 1995-330050

XRAM Acc No: C00-082161

XRPX Acc No: N00-201360

**Organic photoconductor with stable higher temperature properties for color electrophotographic printing, comprises a phthalocyanine pigment, a specified binder and specified functional groups on the binder or a separate additive**

Patent Assignee: HEWLETT-PACKARD CO (HEWP )

Inventor: GANAPATHIAPPAN S; NGUYEN K C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6027844	A	20000222	US 94218205	A	19940325	200023 B
			US 95506283	A	19950724	

Priority Applications (No Type Date): US 95506283 A 19950724; US 94218205 A 19940325

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6027844	A		13	G03G-005/06	CIP of application US 94218205

Abstract (Basic): US 6027844 A

NOVELTY - A single layer positive organic photoconductor comprising a phthalocyanine pigment and a binder (co)polymer with an aliphatic main chain bearing a pendent saturated ring is provided with thermal stability of its **electronic** properties at 35-75 degreesC by incorporating 4-35 wt.% per repeat unit of specified functional groups on the binder and / or a separate thermal carrier generation control **agent**.

DETAILED DESCRIPTION - A single layer positive organic photoconductor comprises a composite comprising at least one photoconductive phthalocyanine pigment of particle size **less than 1** microns, which is uniformly dispersed in a polymeric binder and includes nitrogen atoms in its structure and, optionally, a chelate metal. The binder has an aliphatic polymer or copolymer main chain bearing a pendent saturated ring. The composite further comprises at least one functional group selected from -OH, -SH, =N-, =NH and -NH<sub>2</sub>, which can form weak bonds with nitrogen or chelate metals of the phthalocyanine pigment, which is provided by the binder and/or at least one separate thermal carrier generation control **agent** and which is present at 4-35 wt.% based on the weight of (co)polymer repeat units so as to provide thermal stability of **electronic** properties of the organic photoconductor at 35-75 degreesC. The composite contains 13-17 wt.% of the pigment component and the polymeric binder has the formula (I):

B=a saturated ring pendent from the main chain, which has the formula (a)-(c) and which is optionally substituted with alkyl, cycloalkyl or allyl:

q=an integer, 3-8 in (a) or 2-8 in (b) or (c);

r=1 or 2;

s=0 or 1;

R<sub>1</sub>-R<sub>11</sub>=-OH, -SH, =N-, =NH, -NH<sub>2</sub>, H, halogen, alkyl, alkoxy or allyl;

m=a real number, 0.15-1.0;

n, p=real numbers, 0-0.85; and

m+n+p=1.0.

An INDEPENDENT CLAIM is also included for a method of providing the above single-layer organic photoconductor with thermal stability at 35-75 degreesC.

USE - In electrophotographic printing, particularly color printing.

ADVANTAGE - The photoconductor shows stable **electrical** properties, including charge acceptance (30-100 V/ microns), dark decay (**less than 5 V/s**) and photodischarge (at least 70% of surface charge with a laser diode of wavelength 780 or 830 nm), in a high-cycle, high-severity electrophotographic printing process operating at an elevated temperature of 35-75 degreesC. The binder maintains the specific morphology of the phthalocyanine pigment and provides a stable pigment dispersion.

pp; 13 DwgNo 0/0

Title Terms: ORGANIC; PHOTOCONDUCTOR; STABILISED; HIGH; TEMPERATURE;  
PROPERTIES; COLOUR; ELECTROPHOTOGRAPHIC; PRINT; COMPRISE; PHTHALOCYANINE;  
PIGMENT; SPECIFIED; BIND; SPECIFIED; FUNCTION; GROUP; BIND; SEPARATE;  
ADDITIVE

Derwent Class: A89; E19; E23; G08; P84; S06; T04

International Patent Class (Main): G03G-005/06

International Patent Class (Additional): G03G-005/05

File Segment: CPI; EPI; EngPI

14/5/19 (Item 15 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013052219

WPI Acc No: 2000-224074/200019

XRAM Acc No: C00-068297

XRPX Acc No: N00-167972

**Insulated electric direct current cable for transmission and  
distribution of electric power has extruded insulation system that  
includes a glycerol fatty acid ester additive**

Patent Assignee: ABB AB (ALLM )

Inventor: BOSTROEM J; CARSTENSEN P; FARKAS A; GUSTAFSSON A; GUSTAFSSON B;  
JOHANNESSON K; NILSSON U; NYLANDER P; GUSTAFSSN A

Number of Countries: 088 Number of Patents: 012

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200008655	A1	20000217	WO 99SE1335	A	19990804	200019 B
SE 9802681	A	20000207	SE 982681	A	19980806	200020
SE 512745	C2	20000508	SE 982681	A	19980806	200029
AU 9955415	A	20000228	AU 9955415	A	19990804	200030
NO 200100592	A	20010222	WO 99SE1335	A	19990804	200129
			NO 2001592	A	20010205	
EP 1103052	A1	20010530	EP 99941942	A	19990804	200131
			WO 99SE1335	A	19990804	
KR 2001072260	A	20010731	KR 2001701528	A	20010205	200209
CN 1322362	A	20011114	CN 99811805	A	19990804	200217
ZA 200100973	A	20020626	ZA 2001973	A	20010205	200251
JP 2002522875	W	20020723	WO 99SE1335	A	19990804	200263
			JP 2000564209	A	19990804	
AU 760355	B	20030515	AU 9955415	A	19990804	200337
MX 2001001363	A1	20020501	WO 99SE1335	A	19990804	200368
			MX 20011363	A	20010206	

Priority Applications (No Type Date): SE 982681 A 19980806

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200008655 A1 E 31 H01B-009/02

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN  
CR CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
KZ LC LK LR LS LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SG SI  
SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

SE 9802681 A H01B-003/44

SE 512745 C2 H01B-003/44

AU 9955415 A H01B-009/02 Based on patent WO 200008655

NO 200100592 A H01B-000/00

EP 1103052 A1 E H01B-009/02 Based on patent WO 200008655

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

KR 2001072260	A		H01B-003/30	
CN 1322362	A		H01B-009/02	
ZA 200100973	A	37	H01B-000/00	
JP 2002522875	W	44	H01B-009/00	Based on patent WO 200008655
AU 760355	B		H01B-009/02	Previous Publ. patent AU 9955415
				Based on patent WO 200008655
MX 2001001363	A1		H01B-009/02	Based on patent WO 200008655

Abstract (Basic): WO 200008655 A1

NOVELTY - Insulated **electric** direct current cable has a polymer-based insulation system comprising at least three layers of extruded and crosslinked polyethylene-based compositions disposed around a conductor, and a glycerol fatty acid ester additive.

DETAILED DESCRIPTION - Insulated **electric** direct current-cable has a polymer-based insulation system comprising at least three layers of extruded and crosslinked polyethylene (XLPE) based compositions disposed around a conductor, and a glycerol fatty acid ester additive of formula (I).

$R1O(C3H5(OR2)O)nR3$  (I)

R1-R3=H or the residue of 8-24C carboxylic acids; and  
n=1 or more.

There are at least two free OH groups and at least one residue of 8-24C carboxylic acid in the molecule.

An INDEPENDENT CLAIM is also included for a method for production of an insulated **electric** direct current (DC) cable, comprising compounding a polyethylene (PE) composition; extruding the compounded PE composition as a part of a polymer-based insulation system disposed around a conductor; and subsequently crosslinking the PE composition into an XLPE composition. Compound (I) is added to the PE composition.

USE - The insulated DC cable is used for the transmission and distribution of **electric power**.

ADVANTAGE - The cable comprises a solid extruded conductor insulation that can be applied and processed without the need for any lengthy time-consuming batch treatment of the cable, thus reducing the production time and costs, and offering the possibility for a continuous or at least semi-continuous production of the cable insulation system. It maintains or improves reliability, low maintenance requirements, and long working life of conventional DC cables. It has stable and consistent dielectric properties and a high and consistent **electric** strength. It exhibits a low tendency to space charge accumulation, a high DC breakdown strength, high impulse strength, and high insulation resistance. The use of an extruded polymeric insulation increases the **electrical** strength, and thus allows an increase in operation voltages, making the cable handy and robust.

pp; 31 DwgNo 0/14

Title Terms: INSULATE; **ELECTRIC** ; DIRECT; CURRENT; CABLE; TRANSMISSION;  
DISTRIBUTE; **ELECTRIC** ; **POWER** ; EXTRUDE; INSULATE; SYSTEM; GLYCEROL;  
FATTY; ACID; ESTER; ADDITIVE

Derwent Class: A25; A85; E17; L03; X12

International Patent Class (Main): H01B-000/00; H01B-003/30; H01B-009/00;  
H01B-009/02

International Patent Class (Additional): C08K-005/103; C08L-023/04;  
H01B-003/44; H01B-013/14

File Segment: CPI; EPI

14/5/20 (Item 16 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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012840079

WPI Acc No: 2000-011911/200001

XRAM Acc No: C00-002096

XRPX Acc No: N00-009171

**Conductive contact material for electrophotographic imaging machines -  
has heat cured urethane as base material and predefined weight percentage  
of radical linking prohibition type antioxidant**

Patent Assignee: INOAC CORP KK (INOA-N); MINOLTA CAMERA KK (MIOC );  
MINOLTA CO LTD (MIOC )

Inventor: CHIMOTO I; HIGASHIGUCHI K; MATSUSHITA K; NAKANO M; SUZUKI T

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5968418	A	19991019	US 98113369	A	19980710	200001 B
JP 11030897	A	19990202	JP 97186320	A	19970711	200001

Priority Applications (No Type Date): JP 97186320 A 19970711

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5968418	A	16	H01B-001/20	
JP 11030897	A	13	G03G-015/02	

Abstract (Basic): US 5968418 A

NOVELTY - A conductive contact material comprises a thermoset urethane containing an antioxidant and an inorganic ion **electrically** conducting **agent**. After ozone exposure, molecule chains scission of the base material antioxidant leads to generation of active monomers and oligomers

USE - As a transfer roller (claimed) in an electrophotographic imaging apparatus, e.g. a copier, facsimile **machine** or printer (i.e. the roller which holds the sheet of paper in contact with the photosensitive drum during transfer of a toner image). Also for transfer sheets, charging brushes, charging rollers, developing rollers, destaticizing sheets, cleaning blades and cleaning rollers.

ADVANTAGE - The conductive roller does not cause soiling of a charged component due to bleeding of materials present in the roller, both initially and after prolonged use. Image noise due to soil on a **charged** component is **reduced** without requiring a large imaging apparatus or a complex manufacturing process. No mechanism is required to separate the transfer roller from the photosensitive drum when the drum stops rotating and the transfer roller does not require a surface coating.

pp; 16 DwgNo 0/6

Title Terms: CONDUCTING; CONTACT; MATERIAL; ELECTROPHOTOGRAPHIC; IMAGE;

**MACHINE** ; HEAT; CURE; URETHANE; BASE; MATERIAL; PREDEFINED; WEIGHT;

PERCENTAGE; RADICAL; LINK; PROHIBIT; TYPE; ANTIOXIDANT

Derwent Class: A25; A85; G08; L03; P84; S06; T04; W02; X12

International Patent Class (Main): G03G-015/02; H01B-001/20

International Patent Class (Additional): G03G-015/08; G03G-015/16

File Segment: CPI; EPI; EngPI

14/5/21 (Item 17 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012107974

WPI Acc No: 1998-524886/199845

XRAM Acc No: C98-157849

XRPX Acc No: N98-410138

**Precoat metal plate with dust proof property for building material, domestic electric appliance, motor vehicle - has baked coating film surface and is made to adsorb substances with charging property lower than that of glass, to maximum surface**

Patent Assignee: NIPPON STEEL CORP (YAWA )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 10230565	A	19980902	JP 9748517	A	19970218	199845 B

Priority Applications (No Type Date): JP 9748517 A 19970218

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10230565	A		5	B32B-015/08	

Abstract (Basic): JP 10230565 A

The metal plate which has a baked coating film surface, is made to adsorb specific substances such as fluorine group wax, polyethylene group wax or fluorine group surface active **agent**. The substances have **charging property lower than** that of glass. The adsorption of substances is performed to the maximum area of the plate surface.

USE - In paintwork process line of precoat metal plate.

ADVANTAGE - Prevents adherence of dust including fine metal powder, by static. Enables assembling product with beautiful appearance. Avoids need for large installation modification of manufacturing line.

Dwg.0/0

Title Terms: PRECOAT; METAL; PLATE; DUST; PROOF; PROPERTIES; BUILD; MATERIAL; DOMESTIC; **ELECTRIC**; **APPLIANCE**; MOTOR; VEHICLE; BAKE; COATING; FILM; SURFACE; MADE; ADSORB; SUBSTANCE; CHARGE; PROPERTIES; LOWER; GLASS; MAXIMUM; SURFACE

Derwent Class: A82; G02; M13; P42; P73

International Patent Class (Main): B32B-015/08

International Patent Class (Additional): B05D-005/12

File Segment: CPI; EngPI

**14/5/22 (Item 18 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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011518928 **\*\*Image available\*\***

WPI Acc No: 1997-495414/199746

XRAM Acc No: C97-157647

XRPX Acc No: N97-412578

**Non-aqueous secondary battery used in electronic device such as portable telephone - has sheet-like cathode which is formed by distributing active material dispersed with two different organic solvents with high and low boiling point, on collector object**

Patent Assignee: FUJI PHOTO FILM CO LTD (FUJF )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 9231961	A	19970905	JP 9655374	A	19960220	199746 B

Priority Applications (No Type Date): JP 9655374 A 19960220

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9231961	A		12	H01M-004/02	

Abstract (Basic): JP 9231961 A

The battery has a non-aqueous electrolyte. A sheet-like anode (1) is provided which contains a mixture of lithium content transition metal compound, an **electrically** conductive **agent** and binder as active material. A sheet-like cathode (2) is provided which contains mixture of occlusion release type lithium ion, lithium salt, **electrically** conductive **agent** and binder as active material. The active material of cathode is dispersed in a mixed solvent of first organic solvent with boiling point **less than** 120 deg C and second organic solvent with boiling point **more than** 120 deg C and is distributed on a collector object to obtain the cathode.

**ADVANTAGE - Reduces** electrolytic liquid spill. Improves **charging** and discharging cycle characteristics. Improves occlusion capacity of lithium ion in cathode active material.

Dwg.1/1

Title Terms: NON; AQUEOUS; SECONDARY; BATTERY; **ELECTRONIC ; DEVICE ;** PORTABLE; TELEPHONE; SHEET; CATHODE; FORMING; DISTRIBUTE; ACTIVE; MATERIAL; DISPERSE; TWO; ORGANIC; SOLVENT; HIGH; LOW; BOILING; POINT; COLLECT; OBJECT

Derwent Class: L03; X16

International Patent Class (Main): H01M-004/02

International Patent Class (Additional): H01M-004/04; H01M-004/58; H01M-010/40

File Segment: CPI; EPI

14/5/23 (Item 19 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011124098

WPI Acc No: 1997-102022/199710

Related WPI Acc No: 1997-255857

XRAM Acc No: C97-032711

XRPX Acc No: N97-084368

**Resin compsn. for electrophotographic toner - comprises high and low mol. wt. polyethylene@ polymers, at least one of which is obtd. by polymerisation in presence of monomer having specific ionisation potential**

Patent Assignee: MITSUI CHEM INC (MITA ); MITSUI TOATSU CHEM INC (MITK )

Inventor: HIRAYAMA N; MATSUMOTO K; TANAKA E; TOBITA J

Number of Countries: 010 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 756208	A1	19970129	EP 96305406	A	19960723	199710 B
JP 9043900	A	19970214	JP 95192785	A	19950728	199717
JP 9151291	A	19970610	JP 96242064	A	19960912	199733
KR 97007513	A	19970221	KR 9630772	A	19960727	199811
US 6011119	A	20000104	US 96684195	A	19960719	200008
JP 3009344	B2	20000214	JP 95192785	A	19950728	200013
KR 191868	B1	19990615	KR 9630772	A	19960727	200056
EP 756208	B1	20010411	EP 96305406	A	19960723	200121
DE 69612435	E	20010517	DE 612435	A	19960723	200135
			EP 96305406	A	19960723	

Priority Applications (No Type Date): JP 95253325 A 19950929; JP 95192785 A 19950728; JP 95245897 A 19950925; JP 95245895 A 19950925

Cited Patents: EP 427278; EP 488413; EP 568309; EP 618511; EP 662641; US 4727010

Patent Details:



Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 756208	A1	E	36	G03G-009/087	
Designated States (Regional): CH DE FR GB IT LI NL					
JP 9043900	A		10	G03G-009/087	
JP 9151291	A		18	C08L-035/00	
KR 97007513	A			G03G-009/08	
US 6011119	A			C08L-033/02	
JP 3009344	B2		9	G03G-009/087	Previous Publ. patent JP 9043900
KR 191868	B1			G03G-009/08	
EP 756208	B1	E		G03G-009/087	
Designated States (Regional): CH DE FR GB IT LI NL					
DE 69612435	E			G03G-009/087	Based on patent EP 756208

Abstract (Basic): EP 756208 A

A resin compsn. for an electrophotographic toner comprises: (a) 5-95 pts.wt. of a high mol. wt. (HMW) ethylene polymer having a wt. average mol.wt. (Mw) of 200,000-1,000,000 and a ratio of Mw to number average mol.wt. (Mn) of 8-300; and (b) 95-5 pts.wt. of a low mol.wt. (LMW) ethylene polymer having a Mw of 3,000-20,000. At least one of the HMW and LMW ethylene polymers is an ethylene polymer which has been obtd. by conducting polymerisation in the presence of a monomer (M) having an ionisation potential (IP) of 10.0-15.0 eV and a difference (E(DiFF)) of 9.0-15.0 eV in level between a highest occupied molecular orbital and a lowest occupied molecular orbital, both determined by computational chemistry. Also claimed is an electrophotographic toner comprising the resin compsn. as above.

USE - The toner is used in copying **machines** or printers for developing latent electrostatic images in electrophotography, electrostatic recording, electrostatic printing, etc..

ADVANTAGE - The resin compsn. features a fast rise in charging and a sufficient quantity of charged **electricity** even in a charge control **agent**-free toner or in a toner using **charge** control **agent** in a **reduced** amt.. The toner also has good thermal and physical properties and good fixing property at both high and low temps. without developing problems such as **offset** and blocking. The reduction or elimination of prior art charge control **agents** is advantageous in that they contain heavy metal, often have high toxicity and are expensive.

Dwg.0/0

Title Terms: RESIN; COMPOSITION; ELECTROPHOTOGRAPHIC; TONER; COMPRISE; HIGH ; LOW; MOLECULAR; WEIGHT; POLYETHYLENE; POLYMER; ONE; OBTAIN; POLYMERISE; PRESENCE; MONOMER; SPECIFIC; IONISE; POTENTIAL  
Derwent Class: A17; A89; D21; E19; G08; P84; S06  
International Patent Class (Main): C08L-033/02; C08L-035/00; G03G-009/08  
International Patent Class (Additional): C08L-033/08; C08L-033/10; C08L-033/14; C08L-043/04; G03G-009/083; G03G-009/087  
File Segment: CPI; EPI; EngPI

14/5/24 (Item 20 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
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010700896 \*\*Image available\*\*  
WPI Acc No: 1996-197851/199620  
Related WPI Acc No: 1996-226475  
XRPX Acc No: N96-166112

**Image developing device of electrophotographic device - has brush roller which is supplied with varying voltage bias, when image or non-image record domain in light sensitive body passes brush roller**

Patent Assignee: TOSHIBA KK (TOKE ); TEC CORP (TODK )  
Inventor: ARAI S; HASHIZUME H

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 8069176	A	19960312	JP 94207179	A	19940831	199620 B
US 5610697	A	19970311	US 95519237	A	19950825	199716
US 5819138	A	19981006	US 95519237	A	19950825	199847
			US 96749666	A	19961115	

Priority Applications (No Type Date): JP 94207179 A 19940831; JP 94222156 A 19940916

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8069176	A		7	G03G-015/08	
US 5610697	A		14	G03G-015/06	
US 5819138	A			G03G-015/24	Div ex application US 95519237 Div ex patent US 5610697

Abstract (Basic): JP 8069176 A

The **device** (4) has an electrification **device** (2) which supplies **power** to a light sensitive body (1). An exposure system (3) which forms an electrostatic image is positioned above the rotating direction of the light sensitive body. A developing roller (5) comes in contact with the light sensitive body so that a toner can adhere to the electrostatic image. A transferring roller (8) forms the toner image on a recording paper (P).

A brush roller (9) is supplied with a **lower** potential **than** the light sensitive body, when an image record domain in the light sensitive body passes the brush roller. The brush roller is supplied with a **higher** potential **than** the light sensitive body, when a non-image record domain in the light sensitive body passes the brush roller.

ADVANTAGE - Reduces size of **device**, thus less expensive **device** can be obtained. Prevents damage at light sensitive body, thus it can be used for long period of time. Enables to apply toner on electrostatic image smoothly. Removes dust that adheres on light sensitive body surface. Enables to maintain **device** easily.

Dwg.1/5

Title Terms: IMAGE; DEVELOP; **DEVICE**; ELECTROPHOTOGRAPHIC; **DEVICE**; BRUSH; ROLL; SUPPLY; VARY; VOLTAGE; BIAS; IMAGE; NON; IMAGE; RECORD; DOMAIN; LIGHT; SENSITIVE; BODY; PASS; BRUSH; ROLL

Derwent Class: P84; S06; T04; W02

International Patent Class (Main): G03G-015/06; G03G-015/08; G03G-015/24

International Patent Class (Additional): G03G-021/00; G03G-021/10

File Segment: EPI; EngPI

14/5/25 (Item 21 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009910733

WPI Acc No: 1994-178439/199422

Related WPI Acc No: 1997-111746

XRAM Acc No: C94-081492

XRPX Acc No: N94-140551

Electrophotographic image formation providing high resolution - using toner comprising matrix resin particles having external additive e.g. hydrophobic silica in amount 0.4 to 1.2 wt per cent and of average size 10 nm for primary particles

Patent Assignee: SEIKO EPSON CORP (SHIH )

Inventor: KOGA Y

Number of Countries: 005 Number of Patents: 019

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2273576	A	19940622	GB 9324836	A	19931203	199422	B
DE 4341326	A1	19940609	DE 4341326	A	19931203	199424	
FR 2698974	A1	19940610	FR 9314516	A	19931203	199426	
JP 6222609	A	19940812	JP 93209666	A	19930824	199437	
US 5467174	A	19951114	US 93159630	A	19931201	199551	
GB 2273576	B	19970409	GB 9324836	A	19931203	199718	
US 5645966	A	19970708	US 93159630	A	19931201	199733	
			US 95513089	A	19950809		
JP 2985594	B2	19991206	JP 93209666	A	19930824	200003	
JP 2000047421	A	20000218	JP 93209666	A	19930824	200020	
			JP 99221749	A	19930824		
JP 2000047422	A	20000218	JP 93209666	A	19930824	200020	
			JP 99221750	A	19930824		
JP 2000047423	A	20000218	JP 93209666	A	19930824	200020	
			JP 99221751	A	19930824		
JP 3216633	B2	20011009	JP 93209666	A	19930824	200164	
			JP 99221749	A	19930824		
JP 3216634	B2	20011009	JP 93209666	A	19930824	200164	
			JP 99221751	A	19930824		
JP 3227439	B2	20011112	JP 93209666	A	19930824	200174	
			JP 99221750	A	19930824		
JP 2002023410	A	20020123	JP 99221750	A	19930824	200211	
			JP 2001135933	A	19930824		
JP 3409850	B2	20030526	JP 99221750	A	19930824	200335	
			JP 2001135933	A	19930824		
JP 2003233223	A	20030822	JP 2001135933	A	19930824	200364	
			JP 2002376867	A	19930824		
JP 2003241441	A	20030827	JP 2001135933	A	19930824	200365	
			JP 2002376865	A	19930824		
JP 2003241506	A	20030829	JP 2001135933	A	19930824	200366	
			JP 2002376866	A	19930824		

Priority Applications (No Type Date): JP 93209666 A 19930824; JP 92324439 A 19921203

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2273576	A		64	G03G-009/08	
DE 4341326	A1		31	G03G-013/22	
FR 2698974	A1		54	G03G-009/08	
JP 6222609	A		13	G03G-009/08	
US 5467174	A		20	G03G-015/06	
GB 2273576	B			G03G-009/08	
US 5645966	A		18	G03G-013/16	Cont of application US 93159630
					Cont of patent US 5467174
JP 2985594	B2		12	G03G-009/08	Previous Publ. patent JP 6222609
JP 2000047421	A		12	G03G-009/08	Div ex application JP 93209666
JP 2000047422	A		12	G03G-009/08	Div ex application JP 93209666
JP 2000047423	A		12	G03G-009/08	Div ex application JP 93209666
JP 3216633	B2		12	G03G-009/08	Div ex application JP 93209666
					Previous Publ. patent JP 2000047421
JP 3216634	B2		11	G03G-009/08	Div ex application JP 93209666
					Previous Publ. patent JP 2000047423
JP 3227439	B2		12	G03G-009/08	Div ex application JP 93209666
					Previous Publ. patent JP 2000047422
JP 2002023410	A		12	G03G-009/08	Div ex application JP 99221750
JP 3409850	B2		11	G03G-009/08	Div ex application JP 99221750
					Previous Publ. patent JP 2002023410

JP 2003233223 A 11 G03G-015/00 Div ex application JP 2001135933  
JP 2003241441 A 12 G03G-013/00 Div ex application JP 2001135933  
JP 2003241506 A 11 G03G-015/08 Div ex application JP 2001135933

Abstract (Basic): GB 2273576 A

A charging **device** (4) places an **electric** charge on the image carrier to a predetermined potential. A photographic image is then formed on the image carrier (1) by light source (6), optics (7). A developer section (9) transports and develops toner (10), transferring toner by contact with charged drum (1).

The toner used contains an additive such as hydrophobic silica in proportion 0.4-1.2%, having a specific resistance of 10 **power** 17 ohm.cm, and a release **agent** of maximum 5%. Toner contains minimal amount of particles **less than** 5 micrometres or **greater than** 12.7 micrometres.

ADVANTAGE - Contact **charge** transfer operates with **lower** potential **than** corona **charge** transfer systems, and results in minimal ozone production. Image quality is greatly improved by additives to minimise streaking, deposits and white voids. Minimised toner filming on various components.

Dwg.3/11

Title Terms: ELECTROPHOTOGRAPHIC; IMAGE; FORMATION; HIGH; RESOLUTION; TONER ; COMPRISE; MATRIX; RESIN; PARTICLE; EXTERNAL; ADDITIVE; HYDROPHOBIC; SILICA; AMOUNT; WEIGHT; PER; CENT; AVERAGE; SIZE; PRIMARY; PARTICLE

Derwent Class: A89; G08; P84; S06

International Patent Class (Main): G03G-009/08; G03G-013/00; G03G-013/16; G03G-013/22; G03G-015/00; G03G-015/06; G03G-015/08

International Patent Class (Additional): G03G-009/09; G03G-009/097;

G03G-015/02; G03G-015/16; G03G-015/20; G03G-021/00; G03G-021/10

File Segment: CPI; EPI; EngPI

14/5/26 (Item 22 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009484461 \*\*Image available\*\*

WPI Acc No: 1993-177996/199322

Related WPI Acc No: 1993-169942; 1993-169943

XRAM Acc No: C93-079394

XRPX Acc No: N93-136299

**Magnetic developer enhancing frictional electrification characteristics - comprises magnetic toner contg. 1st charge controlling agent , magnetic toner, and 2nd charge controlling agent having higher vol. specific resistance than 1st agent**

Patent Assignee: HITACHI METALS LTD (HITK )

Inventor: ASANAE M; FUNAKAWA A; GOTO R

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 5107800	A	19930430	JP 91264297	A	19911014	199322 B
US 5429900	A	19950704	US 92950900	A	19920925	199532
JP 2763427	B2	19980611	JP 91264297	A	19911014	199828

Priority Applications (No Type Date): JP 91264297 A 19911014; JP 91257386 A 19911004; JP 91257387 A 19911004

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 5107800	A		6	G03G-009/08	
US 5429900	A		8	G03G-009/083	

Abstract (Basic): JP 5107800 A

The magnetic developer comprises a mixt. of magnetic toner and magnetic carrier. The magnetic toner contains at least a binding resin, magnetic powder (10 - 60 wt.%), and a charge controlling **agent** (I) (0.5 - 5 wt.%). Another charge controlling **agent** , 0.05 - 1 pt.wt. per 100 pts.wt. magnetic powder, having vol. specific resistance **higher than** that of controlling **agent** (I) is externally added to the magnetic developer.

USE/ADVANTAGE - For developing an electrostatic charge image formed on the surface of an image support. The magnetic developer dramatically enhances frictional electrification characteristics in a developing system in which a permanent magnet member is fixed and the surface of a photoreceptor and the surface of a sleeve move in the same direction. Reduces rise time after starting of a processing **machine** . No image intensity is decreased in continuous development.

ti

Dwg.1/1

Title Terms: MAGNETIC; DEVELOP; ENHANCE; FRICTION; **ELECTRIC** ; CHARACTERISTIC; COMPRISE; MAGNETIC; TONER; CONTAIN; CHARGE; CONTROL; **AGENT** ; MAGNETIC; TONER; CHARGE; CONTROL; **AGENT** ; HIGH; VOLUME; SPECIFIC ; RESISTANCE; **AGENT**

Derwent Class: G08; P84; S06

International Patent Class (Main): G03G-009/08; G03G-009/083; G03G-009/097

International Patent Class (Additional): G03G-009/087

File Segment: CPI; EPI; EngPI

**14/5/27    (Item 23 from file: 350)**

DIALOG(R) File 350:Derwent WPIX

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009061988

WPI Acc No: 1992-189380/199223

XRAM Acc No: C92-086633

XRPX Acc No: N92-142883

**Toner prodn. for electrophotography - involves adding zinc oxide fine particles to toner particles**

Patent Assignee: FUJI XEROX CO LTD (XERF )

Number of Countries: 001    Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 4124678	A	19920424	JP 90243776	A	19900917	199223    B

Priority Applications (No Type Date): JP 90243776 A 19900917

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 4124678	A		4	G03G-009/08	

Abstract (Basic): JP 4124678 A

Toner is obtd. by adding the zinc oxide fine particles having 1 - 10 **power** 8 ohms cm of the vol. specific resistivity and 100 - 500 microns of average primary particle size, to the toner particles.

Pref. the zinc oxide fine particles have **electric** resistivity **lower than** that of the zinc white mfd. by ordinary vapour phase oxidn. method. The binder resin used in the toner particles is styrene, vinyl ester, vinyl ether, vinyl ketone, etc.. Fluidising **agent** , charging **agent** , and/or cleaning **agent** may be added to the toner with the zinc oxide fine particles when necessary.

USE/ADVANTAGE - The distribution of the **charging** can be **reduced** and the **charging** speed can be improved without lowering the charging property of toner. The positively chargeable developer of long life free from the contamination of background and **machine**, can be obtd.  
Dwg.0/0

Title Terms: TONER; PRODUCE; ELECTROPHOTOGRAPHIC; ADD; ZINC; OXIDE; FINE; PARTICLE; TONER; PARTICLE  
Derwent Class: E32; G08; P84; S06  
International Patent Class (Main): G03G-009/08  
File Segment: CPI; EPI; EngPI

14/5/28 (Item 24 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
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009018253

WPI Acc No: 1992-145596/199218

XRAM Acc No: C92-067297

**Maleimide(s)-aromatic vinyl monomer copolymer(s) prepn. - by charging water in reactor, reducing pressure, charging maleimide, returning pressure, feeding dispersion cyanovinyl monomer, etc.**

Patent Assignee: SHOWA DENKO KK (SHOW )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 4085302	A	19920318	JP 90196344	A	19900726	199218 B

Priority Applications (No Type Date): JP 90196344 A 19900726

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 4085302	A		6		

Abstract (Basic): JP 4085302 A

Prepn. of maleimide-aromatic vinyl cpd(s) copolymer (I) by aq. suspension polymerisation of maleimide(s) (II) with aromatic vinyl monomer(s) (III) and cyanovinyl monomer(s) (VI) comprises (1) Charging water (V) to reactor, (2) Reducing pressure of reactor to -100 to -500mmHg, (3) Charging (II) into (V) through nozzle by suction of the reactor, (4) Returning the pressure of the reactor to ordinary pressure, (5) Feeding dispersion stabilisers (VI), (III) and (IV) to start polymerisation.

Pref. (V) is fed to a reactor, reactor is degassed to reduced pressure to -100 to -500mmHg. (II) is fed to the reactor below surface of (V) from container through pipe of which one terminal end is set below surface of (V) by 5cm or more. Pressure of the reactor is returned to ordinary pressure, (VI), mixture of (III) (pref. styrene, alpha-methylstyrene, p-methylstyrene, and (IV) (pref. polymerisation initiator and (IV) (pref. acrylonitrile), polymerisation initiator (VII) and chain transfer **agent** (VIII) is fed to the reactor successively. Pref. ratio of (II)/(III)/(IV) is 5-65 wt.%/30-85 wt.%/1-35 wt.%.

USE/ADVANTAGE - (I) has good resistance to heat and impact, mouldability, used as material of car parts, **electronic** and/or **electric** parts, office **equipment** etc. In prior arts, vinyl monomer is fed to reactor first, then maleimide is fed to reactor. In present procedure, (II) is fed to reactor, esp. into (V), safely, (I) can be prepared **more** safely **than** prior arts.

In an example for prepn. of maleimide-styrene-acrylonitrile copolymer (V) (5kg) was charged to a reactor (10L), the reactor was

degassed to -200mmHg to -300mmHg with stirring. Maleimide (1.9kg) was fed to the reactor through pipe below surface of (V). Calcium phosphate (15g), sodium dodecylbenzenesulphonate (0.075g) were fed to the reactor, then mixture of styrene (2.2kg), acrylonitrile (0.9kg), lauryl peroxide (1.0g), tert-butylperoxy laurate (1.6g), dodecyl mercaptan (5g) was fed to the reactor. Copolymerisation was carried out at 50 deg.C for 30 min, at 80 deg.C for 2 hr, at 120 deg.C for 2 hr, finally reaction temp. was raised to 135 deg.C over 1 hr. to obtain copolymer. (0/0)

Dwg.0/0

Title Terms: MALEIMIDE; AROMATIC; VINYL; MONOMER; COPOLYMER; PREPARATION; CHARGE; WATER; REACTOR; REDUCE; PRESSURE; CHARGE; MALEIMIDE; RETURN; PRESSURE; FEED; DISPERSE; CYANO; VINYL; MONOMER

Index Terms/Additional Words: VINYL]

Derwent Class: A13

International Patent Class (Additional): C08F-002/18; C08F-212/06;

C08F-222/40

File Segment: CPI

14/5/29 (Item 25 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008373522 \*\*Image available\*\*

WPI Acc No: 1990-260523/199034

XRPX Acc No: N90-201806

**Developing unit for multi-colour electrophotographic unit - with driving electric field for jumping toner maintaining at air gap between photoconductor and developer- agent layer**

Patent Assignee: HITACHI KOKI KK (HITO ); HITACHI LTD (HITA )

Inventor: KOMATSU I; KUMASAKA T; SIMAZAKI Y

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4947200	A	19900807	US 89353753	A	19890517	199034 B

Priority Applications (No Type Date): JP 88120568 A 19880519

Abstract (Basic): US 4947200 A

The developing **device** is controlled in height of a developer-**agent** layer on a developer roll. It sets a developing gap between the photoconductor and the developer roll in such a manner that a driving **electric** field required for jumping of the toner can be maintained at the air gap between the photoconductor and a developer- **agent** layer on the developer roll and developing bias voltage can be brought to a value **lower than charged electric** potential of the photo-conductor.

By setting the developing bias voltage to the valve **lower than** the **charged electric** potential of the photoconductor, jumping of additional or unnecessary toner is restricted so that contamination of an image and a recording sheet can be prevented. A multi-colour recording unit having this developing **device** prevents toner developer **agents** different in colour from being brought into contact with each other to form a clear multi-colour image without mixing in colour and contamination.

USE - Developing **device** of non-contact development type in which a toner is jumped to a photoconductor to develop a latent image on the photoconductor. (12pp Dwg.No.2/10)

Title Terms: DEVELOP; UNIT; MULTI; COLOUR; ELECTROPHOTOGRAPHIC; UNIT; DRIVE

; **ELECTRIC** ; FIELD; JUMP; TONER; MAINTAIN; AIR; GAP; PHOTOCONDUCTOR;  
DEVELOP; **AGENT** ; LAYER  
Derwent Class: P84; S06  
International Patent Class (Additional): G03G-015/08  
File Segment: EPI; EngPI

14/5/30 (Item 26 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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007246577  
WPI Acc No: 1987-243584/198735  
XRAM Acc No: C87-102896  
XRPX Acc No: N87-182196

**Toner roller for electrostatic copier - comprises thin synthetic resin layer over elastic base and electrically conductive surface or embedded conducting powder**

Patent Assignee: RICOH KK (RICO )  
Inventor: NISHIDO K; TARUMI N  
Number of Countries: 003 Number of Patents: 004  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3705341	A	19870827	DE 3705341	A	19870219	198735 B
JP 63100482	A	19880502	JP 86270438	A	19861113	198823
US 4827868	A	19890509	US 8714602	A	19870213	198922
DE 3705341	C2	19930121	DE 3705341	A	19870219	199303

Priority Applications (No Type Date): JP 86270438 A 19861113; JP 8632774 A 19860219; JP 86120576 A 19860526

Patent Details:  
Patent No Kind Lan Pg Main IPC Filing Notes  
DE 3705341 A 9  
US 4827868 A 8  
DE 3705341 C2 8 G03G-015/08

Abstract (Basic): DE 3705341 A

A toner roller for the development section of an electrostatic copying **machine** is designed to bear against the sheet carrying the latent image and to transfer the toner powder to this sheet. The roller comprises a shaft (110), an elastic layer (120) surrounding the shaft and a thin synthetic resin layer (130) outside the elastic layer; a **device** (140) for creating **electrical** conductivity is also provided. The **electrical** conductivity **device** may comprise an **electrically** conducting layer (140) on the surface of the thin synthetic resin layer (130), more specifically a synthetic resin binder containing a conducting powder.

Alternatively, the conducting **device** may be a conducting material enclosed within the thin synthetic resin layer, more specifically carbon black. In a variant of any of the above, a non-conductivnon-conducting thin toner-carrying layer (150) of plastics may constitute the surface. This layer may contain a material of low resistance at its surface, esp. a powder having a resistance of **less than 10 power** (12) ohm/cm, esp. carbon black. The toner carrier may contain silicone resin or fluoride.

USE/ADVANTAGE - As a toner carrier for the development section of an electrostatic copying **machine**. The roll will not damage the sheet carrying the latent image.

1/9

Title Terms: TONER; ROLL; ELECTROSTATIC; COPY; COMPRISE; THIN; SYNTHETIC;



RESIN; LAYER; ELASTIC; BASE; **ELECTRIC** ; CONDUCTING; SURFACE; EMBED;  
CONDUCTING; POWDER  
Index Terms/Additional Words: ELECTROPHOTOGRAPHIC; FACSIMILE  
Derwent Class: A89; G08; P84; S06; W02  
International Patent Class (Main): G03G-015/08  
File Segment: CPI; EPI; EngPI